EXHIBIT
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1   IN THE UNITED STATES DISTRICT COURT

2   FOR THE DISTRICT OF DELAWARE

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4   SRI INTERNATIONAL, INC., a
     California Corporation,

5

            Plaintiff,

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        vs.   Case No. 04-1199-SLR

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     INTERNET SECURITY SYSTEMS,

8   INC., a Delaware
     corporation, INTERNET

9   SECURITY SYSTEMS, INC., a
     Georgia corporation, and

10   SYMANTEC CORPORATION, a
     Delaware corporation,

11

            Defendants.

12   _____/

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14   Deposition of

15   FREDERICK M. AVOLIO

16   May 18, 2006

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20   Reported by
     John Wissenbach, CSR 6862

21

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1   that's mentioned here, "Firewalls and Internet

2   Security." Also, Chapman and Zwicky's book mention

3   that as being part of what makes up a firewall: the

4   ability to log and keep track of -- of data.

5   Q. Would you agree that as of 1998, that some

6   firewalls did not have logging capabilities?

7   MS. BROWN: Objection; vague.

8   THE WITNESS: All firewalls that -- well,

9   some value of "all." All the major firewalls at the

10   time did some logging. It was a requirement of any

11   security system to have logging.

12   In fact, most of the firewalls at the

13   time -- most of the firewalls at the time routinely

14   and somewhat automatically did logging, in that most

15   of them were built on some version of Berkeley UNIX

16   using the syslog utility. It was a standard utility

17   for years before that time period. It was just

18   something that software developers used when

19   developing software on UNIX systems. It was also

20   something that was standard on firewalls. It was a

21   requirement to have logging on a firewall.

22   BY MR. POLLACK:

23   Q. So would it be your opinion that all

24   firewalls that existed in 1998 all had logging

25   capability?

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1   MS. BROWN: Objection; vague, calls for

2   speculation.

3   THE WITNESS: Certainly not all, because

4   "all firewalls" include the simplest router. Today

5   the simplest firewalls, on home systems, for

6   example, or on a Windows PC or on a Macintosh, do

7   some kind of logging. All do. I'm sure there -- I

8   shouldn't say I'm sure. I suppose there might have

9   been firewalls that did not do logging. But that

10   was a requirement of -- of -- of firewalls at the

11   time.

12   BY MR. POLLACK:

13   Q. Would you also agree that in -- as of 1998,

14   the logging facilities that were provided varied

15   fairly considerably among the different products

16   offered by vendors?

17   MS. BROWN: Objection; vague.

18   THE WITNESS: I -- I wouldn't be able to --

19   I know logging was a differentiator, and what was

20   logged. But I don't know how -- you said varied

21   considerably. I don't know if I would say that.

22   I -- I couldn't say that.

23   BY MR. POLLACK:

24   Q. You don't recall having said that before?

25   A. I certainly recall having said in

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1   particular field at all; just like earlier in the

2   document, I said audit logs are logs. Auditors care

3   about the word "audit." But they're used

4   interchangeably routinely. They were back in the

5   early nineties. They are today.

6   BY MR. POLLACK:

7   Q. So it's your belief, then, that there are

8   lots of different kinds of activity logs, and one of

9   which would be a firewall log, would be an example?

10   A. I would say that firewall logs can be

11   characterized as activity logs.

12   Q. Would you say that other things could be

13   characterized as activity logs?

14   MS. BROWN: Objection; calls for

15   speculation, incomplete hypothetical.

16   THE WITNESS: Well, yeah. On my PowerBook,

17   the PowerBook logs activities, not all of which is

18   related to firewalls. So "activity log" is a more

19   general term, which includes firewall logs, or which

20   may include firewall logs.

21   BY MR. POLLACK:

22   Q. And would the same be true for application

23   logs, that it's a more general term that may include

24   firewall logs but would include other types of

25   applications as well?

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1   MS. BROWN: Objection; vague.

2   THE WITNESS: Could.

3   BY MR. POLLACK:

4   Q.   I'll refer you to page 22 of your report,

5   paragraph 67.

6   A.   Yes.

7   Q.   You state that "firewall configuration

8   requires one to set the firewall to monitor," and

9   then paren 1, "network connection requests for

10 packets that will be allowed to pass through the

11 firewall," quote, "'pass-through traffic.'"

12   Why -- why is it that you believe that the

13 firewall has to monitor network connection requests

14 to decide whether or not to pass through a packet?

15   MS. BROWN: Objection; vague.

16   THE WITNESS: Well, I believe it's true.

17 And in Garfinkel and Spafford, they point that out.

18 In -- I mean, that's one of the basic -- well, let

19 me see.   I'm reading your question again.

20   A network connection request is required

21 before a firewall can look at a packet at all.   So

22 by definition it has to recognize network connection

23 requests.   Firewalls monitor those such things.

24 BY MR. POLLACK:

25   Q.   Is it your opinion that firewalls base

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1   Q. So is it your opinion that in 1997, 1998,

2   vendors would be recommending that users of their

3   products log everything that the firewall was

4   capable of logging?

5   MS. BROWN: Objection; calls for

6   speculation, lacks foundation.

7   THE WITNESS: No, and in particular they

8   didn't recommend that. But -- but firewalls did log

9   connections. That was less a part of the firewall

10   particular function and more a function of the

11   network kernel in the -- in BSD UNIX and in other

12   versions of -- of UNIX at the time.

13   BY MR. POLLACK:

14   Q. Isn't it true that there were practical

15   limitations in the 1998 time frame as to what one

16   could log without detracting from the performance of

17   the firewall?

18   MS. BROWN: Objection; lacks foundation,

19   calls for speculation.

20   THE WITNESS: There's always going to be --

21   yes. Sure.

22   BY MR. POLLACK:

23   Q. And so it's true that one would have to

24   apply some thought and analysis to the types of

25   information that they believed was appropriate and

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1   practical to log in any particular environment,

2   correct?

3   A.   Yes.   The -- yes, that's correct.   Most --

4   the firewalls that used Berkeley UNIX foundations

5   did log network connections, because the Berkeley

6   kernel logged network connections.   Firewalls --

7   other firewalls, that are mentioned in the ICSA Labs

8   buyer's guide -- there's a -- there was a list of

9   things that ought to be logged, should be logged,

10   and, by reference, some of the things that firewalls

11   at the time did log, in the paper, the report.

12   MS. BROWN: Do you think we could maybe

13   take a quick break now?

14   MR. POLLACK: Sure.

15   We're going to go off the record and take a

16   ten-minute break.

17   THE VIDEOGRAPHER: This marks the end of

18   tape number 1 in the deposition of Frederick M.

19   Avolio.   Going off the record, the time is 10:56

20   a.m.

21   (Recess taken.)

22   THE VIDEOGRAPHER: Going back on the

23   record, the time is 11:04 a.m.

24   BY MR. POLLACK:

25   Q.   Referring you a little further in your